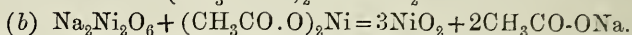
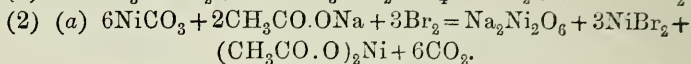
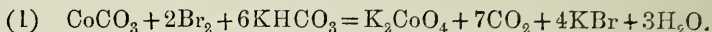


It is suggested that the formation of these salts may, possibly, be represented by the following equations:—



It has been said above, that the nickel solution decomposes on boiling, a *part only* of the nickel coming down, leaving a neutral solution of apple-green colour.

An Account of the Reptilia collected by Dr. F. P. Maynard, Captain A. H. McMahon, C.I.E., and the Members of the Afghan-Baluch Boundary Commission of 1896.—By A. ALCOCK, M.B., C.M.Z.S., Superintendent of the Indian Museum, and F. FINN, B.A., F.Z.S., Deputy Superintendent of the Indian Museum.

Plates XI–XV.

[Received 10th September, 1896; Read 2nd December, 1896.]

The Reptiles mentioned in this paper were collected by the Members of the Afghan-Baluch Boundary Commission, in the early part of the present year, in the course of the demarcation of the boundary-line between Baluchistan and Afghanistan. They include several extremely rare, and two new, species of Lizards and two new snakes—a *Lytorhynchus*, and a Viper which forms the type of a new genus.

The nature of the country in which they were collected is briefly described in the following introductory note by Dr. F. P. Maynard, I.M.S., who has also contributed field notes on the habits, colouration, etc., of the several species.

All Dr. Maynard's notes are enclosed between square brackets.

[1. *Note on the Physical Features of the country traversed by the Commission.—By DR. F. P. MAYNARD, I.M.S.*]

[Spintijha, where the collecting began, is 6050 feet above sea level, and is situated among the Khwaja Amran mountains south of Chaman. There is here what is stated to be an earthquake crack running north-east to south-west. It runs at right angles to the natural drainage of the country, and is supposed to have opened and partially closed within the memory of man. Captain McMahon had previously traced it as far north as Murgha Chaman, and on this mission it was traced south nearly as far as Nushki, a total length of about 100 miles. The rocks on its western side are igneous and on its eastern sedimentary.

From Spintijha we struck the Lora River, and followed its course south to its termination in the plains of Shoráwuk and Nushki. Game was abundant all along the river and most of the birds obtained were shot round about Sáhib Záda Kili, a village at the northern end of Shorawuk, which is all Afghan territory. Near this village the waters of the Lora river are diverted into irrigation channels, and used for turning wheat-grinding mills. In February, at the time of our visit, wheat and barley crops were coming on well, and the plain appeared fertile. This appearance was confirmed by the numerous large *pukka* built villages. After leaving them we practically met with no more inhabitants, a few nomad families being the only people we saw.

From Nushki onwards to Robat I, the country was of a more desert character, and water was scarce. Barren rocky mountains alternated with intervening sandy plains. We crossed the northern end of the Lora Hamun. This is a large area of flat desert '*pat*' which, having been occasionally flooded with water, has become covered with a thin saline coating, and is now one huge white level plain about 36 miles by 10 miles in area. It is without vegetation save for an occasional low bush. All the same some lizards were caught far from its edge, and we had a magnificent three miles gallop after '*gad*' (antelope) which seemed to be fairly numerous and very wary and fleet.

Robat I is situated just south of the Koh Malik-do-khand, on the bank of a small stream. This *Koh* is a remarkable granite mountain with a double peaked top which gives it its resemblance to a double crowned tooth,—the meaning of the name it bears. Although there is said to be a *ziarat* (shrine) on the summit of the blunter peak, its sides are very precipitous and appear unscaleable, and rise straight up 2500 feet from the plain below, making the hill the most striking looking object for fifty miles round. On some rocks at the foot were scratched several rough sketches of ibex. Near the northern foot were some beds of red and white marble. There was also a hot spring credited with medicinal powers. The water contained chiefly sulphate of magnesiun.

From Robat I to Robat II (the word *robat* signifying *outpost* and being common all over Afghanistan), at the foot of the Koh-i-malik Siah, the country is desert pure and simple. The route skirted along the northern foot of successive barren mountain ranges and crossed alternate gravel plains (*dasht*) and sand mountains. "Sandhill" does not describe these, as they are not composed of sand entirely, but are really rocky hills that have become buried in sand. Vegetation was very scanty and water even more so. Water was only met with in about seven places in the 270 miles, and was always saline and generally scanty, being found either in springs or by digging wells.

Two salt lakes were seen. The Gaud-i-Zirreh, some 60 by 20 miles in size, is formed by overflow water from the Helmund river. The last flood was in 1884, but the lake is still very large. The water is intensely salt from evaporation. At its western end the lake receives the Shelag river, which is now dry, except near Godar-i-Sháh, where a small salt lake still exists in the river bed. We dug wells near its banks and obtained very brackish drinking water. At Robat II, where Baluchistan, Afghanistan, and Persia meet, are the remains of extensive old copper smelting furnaces, and the hills round are said to be rich in metals.

The only inhabitants of the desert plains seemed to be wild asses and lizards. In the different mountain ranges, Sultán Koh, Kacha Koh, etc., were seen ibex, markhor and oorial, but a few ibex only were obtained. The Sultán Koh are rich in assafoetida, sulphur and some dyes.

We experienced great variations in the way of climate. In February, while still among the Khwaja Amran and Sarlat mountains, the cold was intense. The thermometer was 15.5° below freezing point, and frozen soda-water, bath water and bread were common occurrences. Snow and hail fell frequently. Later on, in April and May, the heat was equally intense. Shade temperatures read up to 115° , and the solar radiation thermometer often registered 205° , the highest point to which the instrument could rise. Violent dust and sand storms occurred daily and "dust devils" literally swarmed. I have counted as many as twenty-six in sight at one time. They varied in size from tiny ones 18 inches high by two or three inches in diameter up to real whirlwinds, a hundred yards across and nearly a quarter of a mile in height, advancing in a grand and destructive manner, whirling everything along with them.

Even comparatively small ones were much dreaded and left a line of fallen tents and scattered contents in their track whenever they passed through the camp. They invariably revolved the reverse way to watch hands and behaved generally as miniature cyclones. *Mirages* were common, and some of the best were seen in the early chill mornings before the sun had risen, or just as it rose. In the absolute sandy desert a red haze was noticed round the moon: not a halo, but a diffused redness, more intense near the moon, and fading away very gradually into the surrounding sky. It was particularly well marked after sandstorms. The dryness of the air in the desert was extreme, the difference between the dry and wet bulb thermometers being frequently 30° to 40° . Thanks to the unusual rain in February—there had been none for two years previously—the hot weather was much delayed, and this it was that enabled the Mission to stay as late as it did. When leaving Robat I in the middle of May, the hot west winds were just

beginning to blow. Usually they begin early in April, and the inhabitants much dread their terrific heat, which they say shrivels everything up, and compels them to remain shut up in their tamarisk houses all day. Our slight experience of them before they had reached their full strength quite bore out these statements, and made us very thankful to get out of the country and back to civilisation. The 307 miles march from Robat I back to Quetta (done in $14\frac{1}{2}$ days including two days' halts) was very trying indeed.

I take this opportunity of thanking Captain McMahon, C.I.E., British Commissioner, Captain H. F. Walters, 24th Baluchistan Regiment, Mr. G. P. Tate, Survey of India, Lieutenant F. C. Webb-Ware, 7th Bombay Lancers, Mr. Nicol Cumming, Head Clerk, Mir Shamshah, Faqir Ahmed, and others with the Mission for their enthusiastic help in collecting.]

2. *List of the Species Collected.*

In this list the principal reference in every case is intended to be to Mr. Boulenger's Standard Volumes—the *British Museum Catalogue of Reptiles*, and the *Reptilia and Amphibia* of the *Fauna of British India* Series. References are also given to citations of later date than the date of publication of those volumes, and to species figured in Mr. W. T. Blanford's *Zoology of Eastern Persia*, although the latter, of course, are to be found in Mr. Boulenger's synonymies.

LACERTILIA.

Family Geckonidæ.

1. *Teratoscincus scincus* (Schleg.)

Teratoscincus scincus, Boulenger, Brit. Mus. Cat. Lizards, I. 12: Ann. Mag. Nat. Hist. (v) XIX. 1887, p. 384: Trans. Linn. Soc. Zool. (ii) V. 1889, p. 94, pl. viii. fig. 1: P. Z. S. 1891, p. 629.

Teratoscincus keyserlingii, Strauch, Mem. Ac. Sci. Petersb. XXXV. 1887, Art. 2, p. 68: Boettger, Zool. Jahrbuch., Syst. etc., III. 1888, p. 878.

[Two specimens. One was caught by Captain McMahon, at 2:30 A.M. on a moonlight night, in the desert between Drana Koh and Zeh, elevation 3000 feet. It ran in spurts from bush to bush and was difficult to catch. It was marked with ten broad black cross-bands on the back and upper surface of the tail, with some reddish-brown scales between: abdomen and throat white: head marked above with black and dark brown. Skin very delicate and fragile—like human skin to the touch.

The other was caught near Robat I, on the sand by a stream.

The natives regard this species as poisonous.]

2. *Ceramodactylus affinis*, Murray.

Ceramodactylus affinis, Boulenger, Brit. Mus. Cat. Lizards, I. 14.

Three specimens differing from the description (*loc. cit.*) in having five broken cross-bands across the dorsum, instead of four.

[Caught near Robat I. Colour in life the same as in spirit].

3. *Stenodactylus orientalis*, Blanford.

Stenodactylus orientalis, Boulenger, Brit. Mus. Cat. Lizards, I. 16: Fauna Brit. Ind., Rept., p. 57, fig. 21.

Colours in spirit pale sandy; a dark band along either side from the snout, through the eye, to the thigh; dark brown reticulations on the upper surface.

[Colours in life: three irregular yellow longitudinal bands, with brownish-black stripes intervening, from top of head to tail: under surface of body and limbs delicate pinkish.]

4. *Gymnodactylus*, sp.

Two small tail-less specimens, apparently near *G. Kachhensis*, Stol.

5. *Agamura cruralis*, Blanford.

Agamura cruralis, Boulenger, Brit. Mus. Cat. Lizards, I. 50: Fauna Brit. Ind., Rept., p. 71, fig. 23.

[Colours in life: five dark cross-bands with fawn-coloured bands between: similar narrower bands on legs and tail: ventral surface white, chin and throat dotted with black. One caught at Kacha (elev. 3300 ft.) was rich reddish sand-colour, with four dark cross-bands and numerous round raised yellow spots on the back; tail with light and dark bands above, yellowish white below; belly white, throat finely speckled with brown; head sandy-brown with fine yellow dots. Iris greyish brown. It was noticed in this—and subsequently in several other species—that there was no consensual reaction of the pupils to light: each pupil contracted to light and dilated in shade independently of the other. This species often bit fiercely at one's finger.]

6. *Agamura persica*, Blanford.

Agamura persica, Boulenger, Brit. Mus. Cat. Lizards, I. 51: Trans. Linn. Soc. Zool. (ii) V. 1889, p. 95, pl. ix. fig. 2: Strauch, Mem. Ac. Sci. Petersb. XXXV. 1887, Art. 2, p. 53: Werner, Verh. zool. bot. Ges. Wien, XLV. 1895, p. 14.

[Ten young specimens of all sizes caught along whole line of march. Nine brownish cross-bars on back; brownish cross-bars on legs: general colour semitransparent: velvety to the touch. Iris with

a yellow inner margin. The youngest, which was caught at night, had no definite colouration.]

Family Agamidæ.

7. *Agama isolepis*, Boulenger.

Agama isolepis, Boulenger, Brit. Mus. Cat. Lizards I. 342: Trans. Linn. Soc. Zool. (ii) V. 1889, p. 96, pl. x: Faun. Brit. Ind., Rept., p. 147, fig. 43.

[A very common species all over the country after leaving Lijji Talao.

In general the throat and the under surface of the body and thighs were cobalt blue, fading in the dark but deepening in bright daylight; a round bright yellow spot, the size of a hemp-seed, on each side of the neck behind the ear; iris brown. Brownish diamond-shaped spots on the back gave the animal, when at rest, some resemblance to an *Echis*. All the specimens were caught on the ground, and though they sometimes hid under bushes, none were seen on bushes. In some specimens eggs were present.]

8. *Agama nupta*, De Fil.

Agama nupta, Boulenger, Brit. Mus. Cat. Lizards, I. 365: Faun. Brit. Ind., Rept., p. 151.

Stellio nuptus, Blanford, Zool. E. Persia, II. 317, pl. xix. fig. 1.

[Four specimens, three caught on black rock at the foot of Koh Málik-do-khand, 5000 feet. Colour iron-black, in one alone the ventral surface was white. The tails broke readily.]

9. *Phrynocephalus olivieri*, Gray.

Phrynocephalus olivieri, Boulenger, Brit. Mus. Cat. Lizards, I. 371: Trans. Linn. Soc. Zool. (ii) V. 1889, p. 96, pl. viii. fig. 2: Faun. Brit. Ind., Rept., p. 153, fig. 44: F. Werner, Verh. zool. bot. Ges. Wien, XLV. 1895, p. 16.

Not uncommon.

10. *Phrynocephalus ornatus*, Boulenger.

Phrynocephalus ornatus, Boulenger, Brit. Mus. Cat. Lizards, III. 496: Trans. Linn. Soc. Zool. (ii) V. 1889, p. 97, pl. viii. figs. 3, 3a-c: Faun. Brit. Ind., Rept., p. 154.

[Thirty specimens. Common all along the line of march, from Nushki onwards.]

11. *Phrynocephalus maculatus*, Anderson.

Phrynocephalus maculatus, Boulenger, Brit. Mus. Cat. Lizards, I. 377: Trans. Linn. Soc. Zool. (ii) V. 1889, p. 97, pl. ix. fig. 3: Faun. Brit. Ind., Rept., p. 155.

Twenty-one specimens.

12. *Phrynocephalus euptilopus*, n. sp. Plate XII.

Head much depressed, snout extremely short; a row of enlarged projecting imbricate scales borders the supra-orbital region and extends anteriorly nearly to the nasals; upper head-scales small, obtusely keeled, not enlarged on occipital region; nostril turned upwards; nasals in contact or separated by one scale; about three series of scales between the orbit and the upper labials.

Dorsal scales small, homogeneous, imbricate, smooth or keeled, not enlarged on vertebral region; small projecting spinose scales on the side of the head and neck; a fold along the flanks.

Gular scales pointed, smooth or very feebly keeled; pectoral and ventral scales sharply mucronate, the former smooth or feebly keeled, the latter smooth.

Scales on limbs smooth or keeled; fringe at back of thigh not usually present. Tibia longer than skull. The adpressed hind limb reaches the eye or the snout. Toes very long, the second, third and fourth with progressively longer fringes of pointed scales on each side; on the fore-foot the fifth also with a double fringe; remaining toes with a single fringe.

Tail depressed, tapering to a point, covered with keeled scales above and at the tip; lower caudal scales for about the proximal half of the tail smooth; the length of the tail about equals that of the head and body.

Colours in spirit sandy, greenish on the head, spotted and vermiculated with blackish, more strongly on the sides and limbs. In all the six specimens collected by the Mission there are some large black roundish spots on the vertex of the head and on the anterior part of the dorsum. Of these, *five*, situated one on the nape, and two on and two just behind the shoulders, are very large, and are *constant*. End of tail black below and generally above.

A large specimen measures:—

Total length...	...	...	...	4.8 in.
Head ...	...	...	...	.35 "
Width of head	...	...	...	.35 "
Snout to vent	...	...	...	2.45 "
Fore limb ...	...	...	...	1.25 "
Hind limb ...	...	...	...	2.0 "
Tail ...	...	...	...	2.35 "

This species comes nearest to *P. interscapularis*, Lichtenst. (Brit. Mus. Cat. Lizards, Vol. I, p. 378) but differs chiefly (actual specimens compared) in the following points:—

1. The new species is very much larger.

2. The pectoral and ventral scales are much more sharply mucronate.
3. The digits are very much more strongly fringed.
4. The colouration is strikingly different.

[All six were caught in April, near Darband, elevation 3000 feet. Darband is a small hollow in the sandy desert, with a couple of wells—the only water for 80 miles.

The lizards were caught on reddish sand, into which, on being approached, they wriggled with such rapidity that they were with difficulty followed. Before burrowing into the sand one would sometimes sit and look at you, gently waving its tail in the air, like a cat before making a spring. The colours have much faded in spirit. In life the back was rich golden brown with the jet-black spots standing out like velvet: the throat in one was lavender, in others salmon pink: the belly was a beautiful silvery white. The upper surface of the limbs presented a lovely golden sheen; the top of the head was metallic green; the distal half of the tail was black.]

13. *Phrynocephalus luteo-guttatus*, Boulenger.

Phrynocephalus luteo-guttatus, Boulenger, Brit. Mus. Cat. Lizards, III. 497: Trans. Linn. Soc. Zool. (ii) V. 1889, p. 98, pl. viii. figs. 4, 4a-c: Faun. Brit. Ind., Rept., p. 155. F. Werner, Verh. zool. bot. Ges. Wien, XLV. 1895, p. 16.

Twenty-eight specimens.

14. *Uromastix asmussii*, (Strauch).

Uromastix asmussii, Boulenger, Brit. Mus. Cat. Lizards, I. 409.

Centrotrachelus asmussii, Blanford, Zool. E. Persia, II. 337, pl. xxi.

Two specimens were brought down alive, but they did not thrive. The largest measures just over twenty inches.

[Three others were caught but got away. When caught they were very fat, and the colour of the back was buff with some of the enlarged tubercles orange-colour. When kept in a closed box they turned to an iron-grey colour and the orange faded entirely, but if removed into sunshine the original colour returned—at first rapidly, but after some weeks captivity only after some hours' exposure to light. The head and limbs at all times were of a dull grey colour.

These lizards live in large wide-mouthed holes in stony ground, at the foot of the Kacha Koh. The burrows, which are altogether about three or four feet long, run obliquely for the first foot or eighteen inches, and then bend sharply at a right angle. The tail of this lizard is a formidable weapon: it is lashed out in defence, and it is probably used to clear the ground while burrowing.

The lizards were only to be seen either in the early morning or in the evening: in captivity they avoided, and appeared to dislike, the hot sun. The natives assert that they eat snakes, which is unlikely. Their stomachs were greatly distended with tamarisk usually. The natives also extract from them an oil which is used for rheumatism and as an aphrodisiac. It is said that the lizards sleep at the mouths of their burrows, and that shikarris catch them by creeping up and breaking in the roof of the burrow with a large stone so as to block the burrow from behind.

Family Varanidæ.

15. *Varanus griseus* (Daud.)

Varanus griseus, Boulenger, Brit. Mus. Cat. Lizards II. 306: Trans. Linn. Soc. Zool. (ii) V. 1889, p. 99: Faun. Brit. Ind., Rept., p. 163. Boettger, Zool. Jahrbuch. Syst. etc. III. 1888, p. 904.

[One, caught by a sepoy on the Shorawuk plain, was placed, when brought in, near some dead snakes, which it at once attacked, biting one of them savagely. Its colour was brick-red with dark greenish-black cross-bands.

Another, 3 feet long, was caught under a bush near Robat I. It made no attempt to escape, but attacked and bit my hunting-crop, raising its head and body off the ground, puffing itself out and hissing loudly. It had greyish-green cross-bands on the back, with irregularly disposed pink scales between, and a pink tinge on the throat.]

Family Lacertidæ.

16. *Acanthodactylus cantoris*, Gthr.

Acanthodactylus cantoris, Boulenger, Brit. Mus. Cat. Lizards, III. 61: Trans. Linn. Soc. Zool. (ii) V. 1889, p. 99: Faun. Brit. Ind., Rept., p. 170. Blanford, Zool. E. Pers. II. p. 381, pl. xxvi. figs. 3, 3a-b. Werner, Verh. zool. bot. Ges. Wien, XLV. 1895, p. 16.

Nineteen specimens.

[Common west of Barabchah. In one specimen the back was brown with a metallic sheen; in another, uniform brown, finely grained.]

17. *Eremias guttulata*, (Licht.)

Eremias guttulata, Boulenger, Brit. Mus. Cat. Lizards, III. 87: Trans. Linn. Soc. Zool. (ii) V. 1889, p. 99: Faun. Brit. Ind., Rept., p. 177: P. Z. S. 1891, p. 630: T. Z. S. XIII. 1891, p. 132. Werner, Verh. zool. bot. Ges. Wien, XLIV. 1894, p. 82 and XLV. 1895, p. 16.

Nine specimens.

[Found the whole way from Nushki to the Persian border. They ran fast from bush to bush, and entered holes. The brownish colour they had when fresh has faded in spirit.]

18. *Eremias velox* (Pall.)

Eremias velox, Boulenger, Brit. Mus. Cat. Lizards III. 97: Trans. Linn. Soc. Zool. (ii) V. 1889, p. 99: Faun. Brit. Ind., Rept., p. 178. Boettger, Zool. Jahrbuch., Syst. etc., III. 1888, p. 910. Werner, Verh. zool. bot. Ges. Wien. XLV. 1895, p. 16.

Eremias persica, Blanford, Zool. E. Pers. II. p. 370, pl. xxvi. figs. 1, 1a.

Eleven specimens.

[The majority were caught at Panjpai, not far from Quetta. These ran very sluggishly, and made for bushes.]

19. *Scaptira scripta*, (Strauch.)

Scaptira scripta, Boulenger, Brit. Mus. Cat. Lizards, III. 112. Boettger, Zool. Jahrbuch., Syst., etc., III. 1888, p. 914.

Three specimens.

[One, obtained by Captain McMahon on the sand hills between Soru and Darband, 3500 feet, had a minute black mosaic pattern over the back: the abdomen was white: the upper surface of the limbs was black with small round yellow spots.]

20. *Scaptira aporosceles*, n. sp. Plate XIII.

Snout conical, acutely pointed; loreal region nearly vertical. Nasals slightly swollen, lower not reaching the rostral, but approaching it closely; upper forming a long median suture. Frontal strongly grooved throughout, the groove continued along the vertex of the snout to the anterior end of the fronto-nasal; three large supra-oculars, forming sutures with each other, the first in contact with the first supraciliary, the second loreal, the prefrontal, and generally the frontal; the second and third completely surrounded by a series of granules, separating them from the supraciliaries, the fronto-parietals, the frontal, the first supra-ocular, and the small band-like posterior supra-ocular; one of these granules commonly develops into a small shield separating more or less completely the first supra-ocular from the frontal. Interparietal lozenge-shaped; no occipital; parietals forming a suture behind the interparietal; no enlarged scales on the outer border of the parietals; temporal scales granular, smooth; no auricular denticulation; subocular not reaching the lip, resting usually on the sixth, seventh and eighth, or fifth, sixth, and seventh, upper labials; the first two pairs of chin-shields and generally the third pair also, in contact.

Collar nearly straight, the marginal scales feebly enlarged. Dorsal scales minutely granular, smooth, equal. Ventrals equilateral or longer than broad, forming oblique longitudinal series; about 35 transverse series, the longest of which contain about 22 plates.

Prae-anal plate single or divided.

The adpressed hind-limb reaches about to the ear or the eye; foot about as long as the distance between the arm and the nostril. Digits flattened, smooth or keeled inferiorly, strongly fringed laterally; the ungual lamellae much enlarged, forming a suboval disc: a series of large sub-tibial shields. *No femoral pores*.

Caudal scales smooth or more or less feebly keeled. Tail about once-and-a-half to twice length of head and body.

One specimen has the anterior loreal on each side double, or rather two small shields are cut off laterally from the fronto-nasal. The subocular may be in contact with two labials only.

Colour in spirits blackish, spotted with whitish; tail blackish above, with ill-defined light median streak; head brownish grey, speckled with black; lower surface white.

A large specimen measures:—

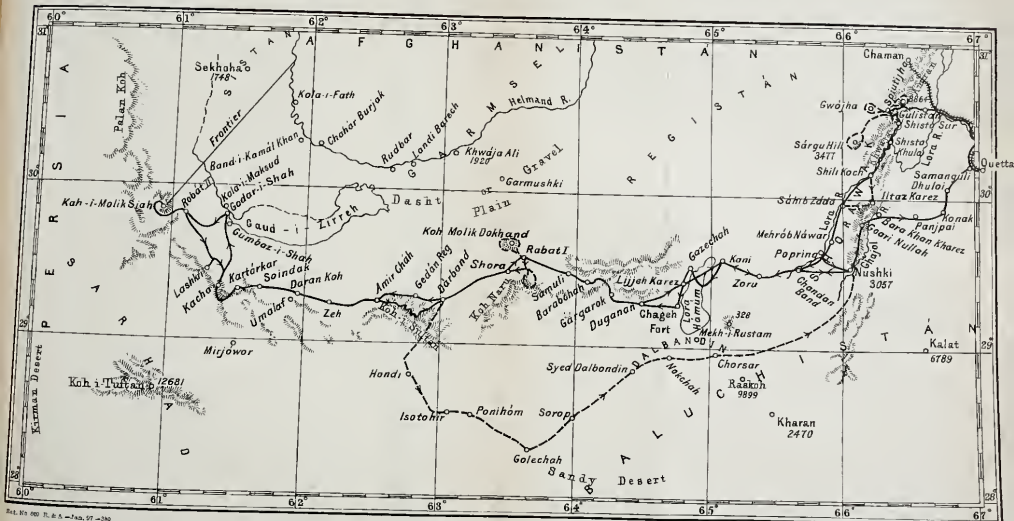
Total length	...	...	...	8.0	in.
Snout to vent	...	...	...	2.75	„
Head	...	...	...	.8	„
Width of head	...	...	...	.5	„
Snout to fore limb	...	...	...	1.15	„
Fore limb	...	...	...	1.0	„
Hind limb	...	...	...	1.75	„
Tail	...	...	...	5.25	„

This species is nearest to *S. acutirostris*, Boulenger, (Brit. Mus. Cat. Lizards, Vol. III, p. 114) but differs (on comparison of actual specimens) from that species in the following characters:—In the new species—

1. The lower nasal shield approaches the rostral more closely than it does in *S. acutirostris*.
2. The vertex of snout (frontal, praefrontal, and fronto-nasal regions) is very much more deeply grooved.
3. The prae-anal plate, which in the new species may be either single or divided, is also relatively very much smaller than in *S. acutirostris*.
4. The fringing of the digits is much more distinct than in *S. acutirostris*, and the ungual lamellae form much broader disks than in that species.

Map showing roughly
THE ROUTE TRAVERSED BY THE BALUCH-AFGHAN BOUNDARY COMMISSION OF 1896.

Scale 1 Inch = 40 Miles.



Lat. No. 880 P. & A. — Jan. 97 — 380

Lat. No. 917, A. & A. — Jan. 97 — 380

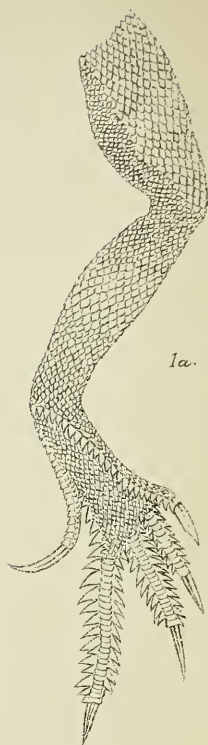
Main line of march

Places visited

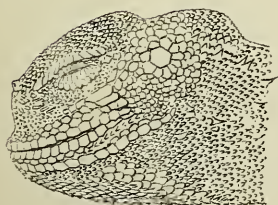
Litho. E. I. O., Calcutta.



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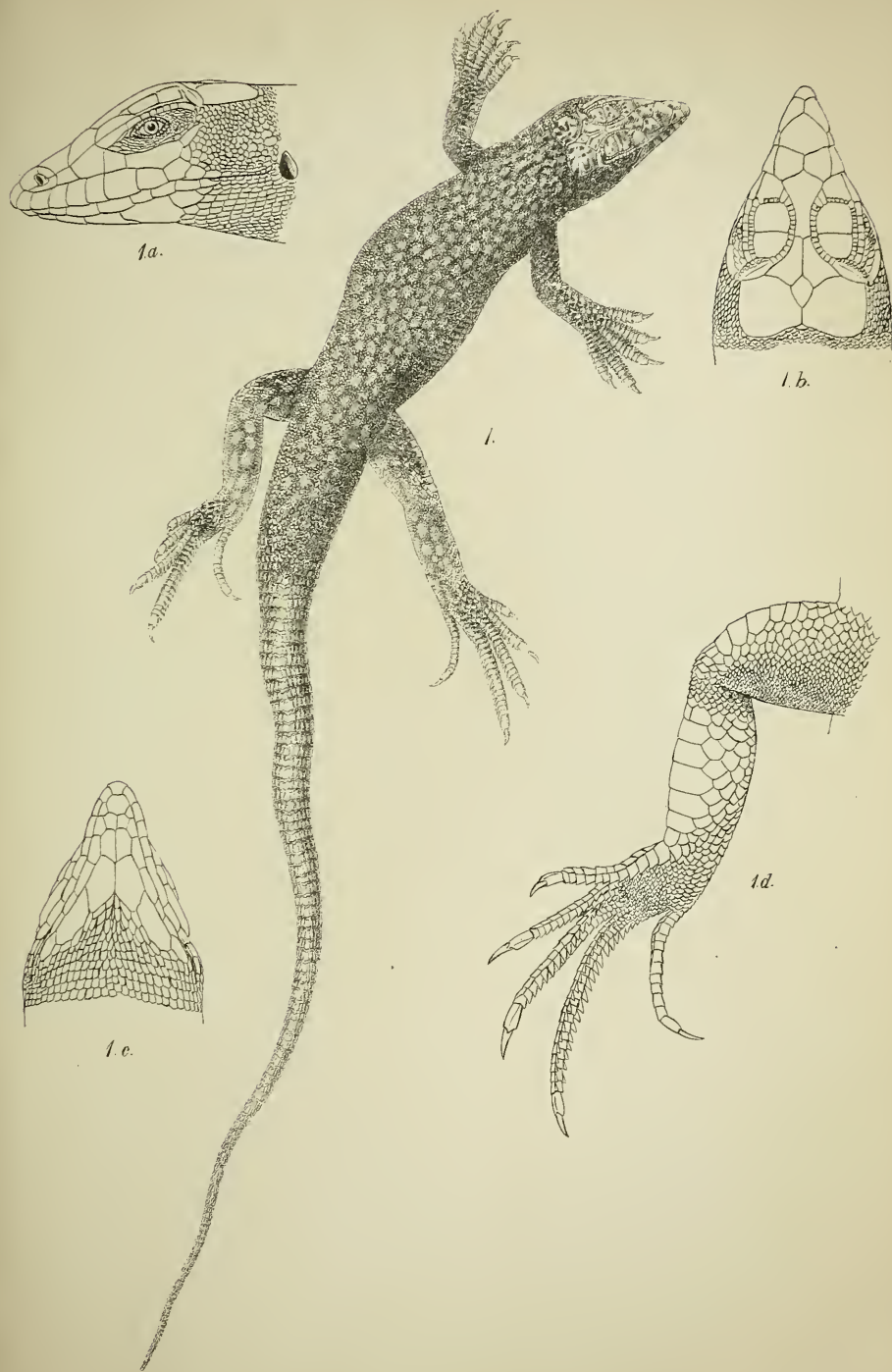
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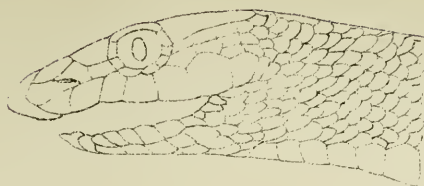


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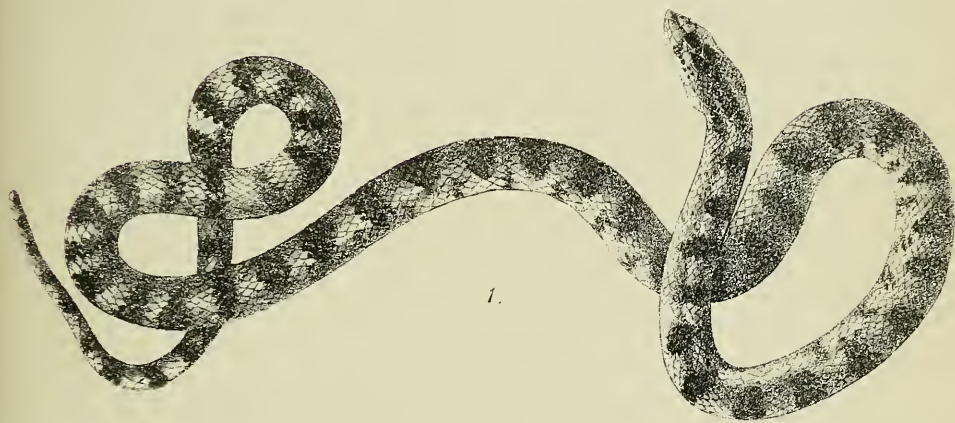


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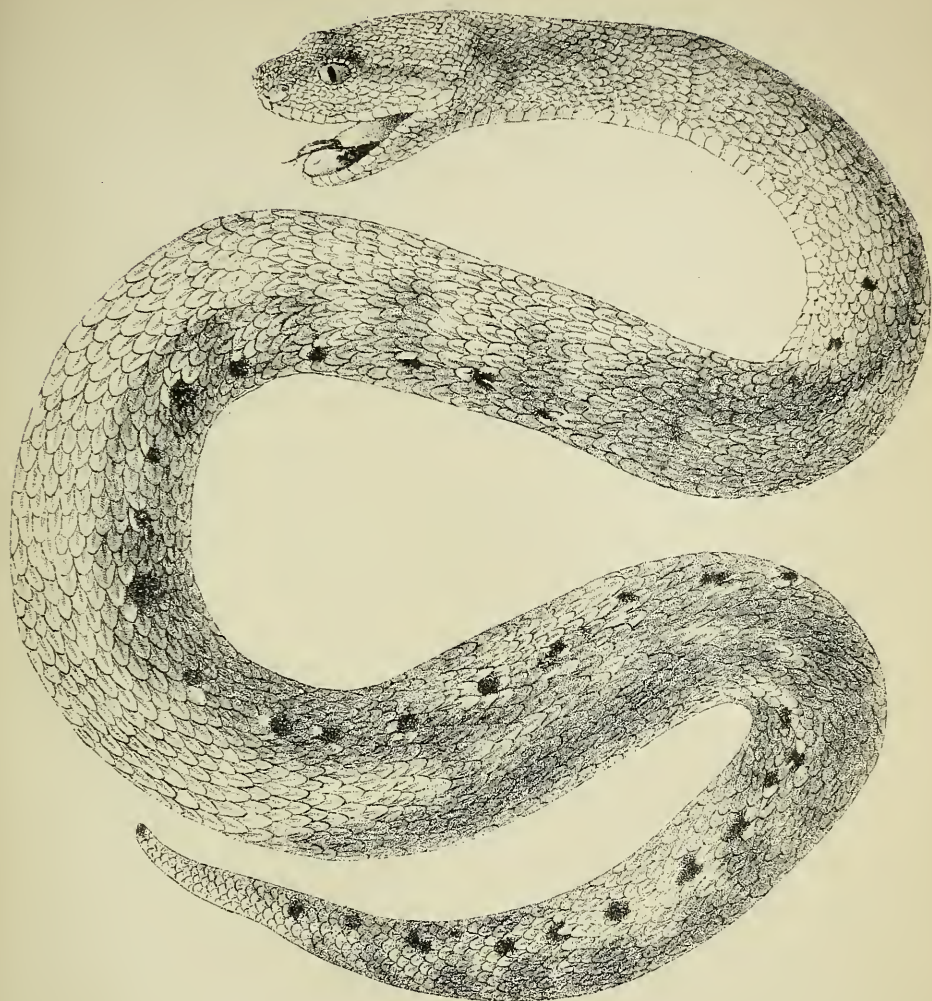
1b.



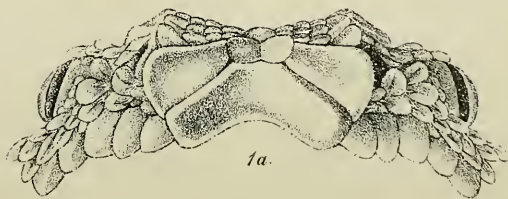
1c.

LYTORHYNCHUS MAYNARDI

A. Chowdhury del et lith



1.



1a.

5. The femoral pores, which in *S. acutirostris* are remarkably distinct, are absent in the new species.

Twenty-five specimens.

[Common west of Robat I. Colours in life: back brownish yellow, with lighter-coloured circular spots. Tails fragile. They ran very fast, made for bushes, and entered holes. In general colouration they resembled *Phrynocephalus luteoguttatus*.]

Family Scincidæ.

21. *Ablepharus brandtii*, Strauch.

Ablepharus brandtii, Boulenger, Brit. Mus. Cat. Lizards, III. 351: Trans. Linn. Soc. Zool. (ii) V. 1889, p. 100: Faun. Brit. Ind., Rept., p. 213. Boettger, Zool. Jahrbuch., Syst., &c., III. 1888, p. 917.

Blanford, Zool. E. Pers. II. p. 391, pl. xxvii. figs. 1, 1a.

A single specimen.

22. *Ophiomorus tridactylus* (Blyth).

Ophiomorus tridactylus, Boulenger, Brit. Mus. Cat. Lizards, III. 394, Bull. Soc. Zool. France, XII. 1887, p. 520: Trans. Linn. Soc. Zool. (ii) V. 1889, p. 101: Faun. Brit. Ind., Rept., p. 222, fig. 59, p. 221.

Eighteen specimens.

[Very common wherever there is sand, but they are hard to catch, as they dive below the surface at the first sign of danger, working into the sand as a snake goes into a hole. They can only be obtained by following up the faint tracks that they leave on the surface of the sand, and digging where the track comes to an end. They are said to be very numerous round Chaman. They are in great request among the natives, who fry them alive in a closed vessel and thus obtain from them a burnt oil of nauseous appearance which is believed to be of great value in impotence.]

OPHIDIA.

Family Glauconiidæ.

23. *Glauconia blanfordi*, Boulenger.

Glauconia blanfordi, Boulenger, Faun. Brit. Ind., Rept., p. 243, fig. 72: Brit. Mus. Cat. Snakes, I. 66.

[Two specimens found beneath a rock which was being lifted to build the last boundary pillar, on the highest peak of the Koh-i-malik Siab, 5000 feet, 16th April. They were of a pink colour in life, and wriggled very actively.]

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Family Colubridæ.

24. *Lytorhynchus ridgewayi*, Boulenger.

Lytorhynchus ridgewayi, Boulenger, Ann. Mag. Nat. Hist. (v) XX. 1887, p. 413: Trans. Linn. Soc. Zool. (ii) V. 1889, p. 102, pl. xi. fig. 1: Brit. Mus. Cat. Snakes I. 415.

The sub-ocular (so-called) poison-gland is well developed, and is of different consistence, to the naked eye, from the upper-lip gland.

[One specimen caught alive at Saindak, 3000 feet, had a noteworthy resemblance to an *Echis carinata* caught at the same time and place.]

25. *Lytorhynchus maynardi*, n. sp. Plate XIV.

Snout pointed, moderately long. Rostral large; viewed from above it is anchor-shaped, the narrow beam of the anchor separating the inter-nasals in about two-thirds of their extent, and the flukes of the anchor embracing the nasals and first upper labials; viewed from below it is shaped like a pointed shovel, the posterior edge of the shovel being conspicuously notched in the middle line to receive a leaf-like process of the mental shield. Nostril a long, narrow, oblique chink. A pair of præ-frontals: frontal not quite three-fourths the length of the distance between its anterior edge and the tip of the snout, rather more than three-fourths the length of the parietals, anteriorly more than twice the greatest breadth of the supra-oculars. Two loreals, the anterior small. A ring of small scales surrounding the eye, of which two are præ-ocular, two post-ocular, and three subocular. Temporals 2+2, the posterior hardly larger than the adjacent scales. Seven upper labials, none of them entering the eye: ten lower labials, four of which are in contact with the anterior chin-shields: mental trilobed, the middle lobe fitting into the notch in the posterior edge of the rostral: two pairs of chin-shields of about equal size.

Scales smooth, in nineteen rows, not including the ventral scutes. Ventrals rather acutely angulated on either side, about 192: anal divided: sub-caudals about 55.

Colours in spirit: cream-colour with a faint pinkish flush on the dorsal surface, and with a close series of large transversely-oblong brownish-black patches or bars: along either side a series of small lighter spots alternating with the dorsal bars: frontal and parietals almost entirely blackish-brown, the colour being continued down the nape, in the middle line, as a broad stripe: a narrow dark line through the eye and temple.

The largest perfect specimen measures at least fifteen inches, of which the tail makes about $2\frac{3}{4}$ inches.

The subocular so-called poison-gland is well developed.

One of the specimens, although only about $\frac{3}{16}$ in. in diameter at the throat, has swallowed a *Scaptira* of our new species more than seven inches long and nearly half an inch in diameter.

Four specimens.

[Near Robat I, 4500 feet, in May. The colour in life was striking, the general colour of the upper surface being bright salmon with blackish-brown bands.]

26. *Zamenis diadema*, Russell.

Zamenis diadema, Boulenger, Fauna Brit. Ind., Rept., p. 328: Brit. Mus. Cat. Snakes, I. 411: Werner, Verh. zool. bot. Ges. Wien, XLV. 1895, p. 18.

The subocular "poison-gland" is very large.

[Nine specimens caught between Lijji Talao and Barabchah, 2400 to 4500 feet.]

27. *Zamenis Karelinii*, (Brandt).

Zamenis karelinii, Boulenger, Faun. Brit. Ind., Rept., p. 326: Brit. Mus. Cat. snakes, I. 401.

The subocular "poison-gland" is more than twice the length of the eye.

28. *Zamenis rhodorachis*, Jan.

Zamenis rhodorachis, Boulenger, Brit. Mus. Cat. Snakes, I. p. 398.

Zamenis ladacensis, Boulenger, Faun. Brit. Ind., Rept., p. 326.

The subocular "poison-gland" is large.

[Fifteen specimens between Gazichah and Robat I. None had red stripes. Scales fine brown, with green edging. They were said by the natives to be poisonous, but they were not fierce.]

29. *Taphrometopum lineolatum*, Brandt.

Coluber (Taphrometopon) lineolatus, Brandt., Bull. Ac. Sci. Petersb. III. 1837, p. 243.

Taphrometopon lineolatum, Boulenger, Brit. Mus. Cat. Snakes, III. p. 151 Blanford, Zool. E. Pers. II. p. 422.

The subocular "poison-gland" is well developed. The stomach of one specimen contained a small passerine bird.

[Nine specimens between Barabchah and Robat, about 4500 feet. The colour of one specimen in life was grey-yellow with fine black dots in two rows along the back: a black line running backwards from each eye.]

Family Viperidae.

ERISTICOPHIS, n. gen.

Head very distinct from neck, covered with small feebly-imbricate scales: eye small, with vertical pupil, separated from the labials by small scales: nostril directed upwards and outwards, forming a valve-like slit at the summit of an enlarged nasal, the nasal separated from the rostral by an enlarged rostro-nasal shield. Body cylindrical, scales in 23 to 24 rows, with simple (*i.e.*, non-serrated) keels, the keels not extending to the tip of the scales: lateral scales varying in size, not or hardly smaller than the dorsals, and hardly oblique: ventrals with a well-defined keel on either side. Tail short, sub-caudals in two rows.

In Mr. Boulenger's Key (Cat. Snakes Brit. Mus. Vol. III. p. 465) this form finds a place in Section II, with *Vipera*, *Echis*, *Cerastes*, &c. It does not, however, fit into any of the three sub-sections of the Key; since, while it has the lateral scales not, or not noticeably, smaller than the dorsals, and the keels of the scales not serrated, and the sub-caudals in two rows, it has the ventrals angulate laterally—more sharply angulate even than *Cerastes*.

We are indebted to Mr. G. A. Boulenger, F.R.S., for the opinion that this Viper is worthy of generic rank.

We are also much indebted to Mr. Boulenger for facilities afforded to one of the authors of this paper for comparing specimens.

30. *Eristicophis Macmahonii*, n. sp. Plate XV.

Snout square, even emarginate by reason of the projection of its wing-like angles and of the slight dorsal concavity of the middle line. The rostral region is covered by 5 scales, the surfaces of none of which are visible from above: these scales are disposed as follows:—(1) a true rostral bounding the mouth, concave, horse-shoe-shaped, from two to three times as broad as high; (2) above and on either side of 1, a pair of pear-shaped scales with projecting edges and concave surface, forming the wing-like angles of the snout; (3) between 1 and 2, a pair of little scales hardly differing from those that form the general investment of the head. The tips of these last are sometimes visible from above.

Nostrils large, valvular, directed upwards and backwards, pierced in the upper and posterior angle of a large nasal.

Scales of the head hardly imbricate, strongly carinate, none of them enlarged except one above either nostril and one at either outer angle of the snout; in thirteen or fourteen very irregular rows between the eyes: four series of scales between the eye and the upper labials: at least five rows of scales between the nostril and the eye.

Fourteen or fifteen upper labials slightly increasing in size from before backwards: sixteen to eighteen lower labials, the first three or four times as large as the second, the rest slightly decreasing in size from before backwards: a pair of chin-shields, separated, especially posteriorly, by a distensible scaleless space: mental acutely triangular.

Scales of the body strongly keeled, arranged in very regular transverse rings, 23 to 24 in each ring, not including the abdominal scute. Although the scales are imbricate, yet their imbrication is rendered obscure by the presence of a good deal of naked skin both between the rings and between the individual scales of each ring.

Ventrals about 140 to about 150, conspicuously angled on either side.

Tail about half again as long as the head, with sub-caudals in two rows, on about the distal half becoming quite similar to the rather strongly imbricate scales on the other surfaces of the posterior half of the tail. The tip of the tail is formed by a single conical scute.

Colours in spirit: dull dirty sandy grey, with a row of small black and white blotches (seldom involving more than 2 or 3 scales) along each side, these being much more distinct in the young: some dark peppering above and at the sides, also most marked in the young.

The length of the largest perfect specimen is about two feet.

Six specimens.

[Amirchah, 30th March, 3300 feet, Zeh, 1st April, 2500 feet, Dranā Koh, 2nd April, Robat I., May, 4300 feet. The largest, measuring 25.5 in., was heard making a very loud continuous hissing, as we left Camp Drana Koh at night; and it raised its head six or eight inches from the ground and struck at my stick when, after searching for it with a lantern, I advanced to kill it.

All were found on sand with which their colours harmonized well. In confinement they fed freely on lizards, but did not live long.

In life they were of a rich reddish sandy brown colour, and the spots along either side of the back were dark brown with a nearly-complete white marginal ring.]

31. *Echis carinata* (Schneid.)

Echis carinatus, Boulenger, Brit. Mus. Cat. Snakes, Vol. III. p. 505.

Echis carinata, Boulenger, Faun. Brit. Ind., Rept., p. 422. Matschie, Zool. Jahrbuch., Syst., etc., V. 1890-91, p. 617. Peracca, Boll. Mus. Torino, IX. 1894, No. 167, p. 17.

[Common along the line of march from Lijji Talao to the Persian Frontier.]

We should like to mention here that Dr. Turnbull and Colonels Holdich and Wahab, who were delimiting the Perso-Baluch Frontier simultaneously with the operations of the Afghan-Baluch Commission, also made a small but valuable collection of Reptiles. Among these, besides many of the species already mentioned, were two fine specimens of *Agama megalonyx* Günther, and a large specimen of *Lytorhynchus ridgewayi* Boulenger.

We may also note here that *Eublepharus macularius* Blyth, has been found in a small collection from Chitral made by Assistant-Surgeon F. J. Daly.

List of the Birds collected by the Afghan-Baluch Boundary Commission of 1896.—By F. FINN, B.A., F.Z.S., Deputy Superintendent of the Indian Museum.

[Read December 2nd, 1896.]

Dr. F. P. Maynard brought home from the Afghan-Baluch Boundary expedition a fine series of well-preserved bird-skins, but as they all belong to well-known species I shall confine myself to giving a nominal list, in which I follow the nomenclature and arrangement of the Bird volumes of the Fauna of British India series so far as these have progressed, and elsewhere as far as possible those of the British Museum Catalogue.

For a general account, with map, of the country traversed, the account of the Reptiles collected by the Commission, appearing in the present number of the Society's *Journal*, (Vol. LXV. Pt. II. No. 4. p. 550) may be consulted. Herein Dr. Maynard states that most of the birds were shot round about Sahib Zada Kili, a village at the northern end of Shorawuk, in Afghan territory.

Dr. Maynard also informs me that most of the specimens were obtained by Lieutenant F. C. Webb-Ware of the 7th Bombay Lancers.

List of the species collected.

- | | |
|-------------------------------|-----------------------------------|
| 1. <i>Corvus corax.</i> | 7. <i>Pratincola maura.</i> |
| 2. <i>Corvus umbrinus.</i> | 8. <i>Saxicola albinigra.</i> |
| 3. <i>Pica rustica.</i> | 9. <i>Saxicola deserti.</i> |
| 4. <i>Prinia lepida.</i> | 10. <i>Ruticilla erythronota.</i> |
| 5. <i>Lanius vittatus.</i> | 11. <i>Ruticilla rufiventris.</i> |
| 6. <i>Lanius isabellinus.</i> | 12. <i>Cyanecula suecica.</i> |